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United States Patent [19][11] **Patent Number:** **5,487,186****Scarpa**[45] **Date of Patent:** **Jan. 23, 1996**

[54] **AUTOMATIC FREQUENCY CONTROL
USING SPLIT-BAND SIGNAL STRENGTH
MEASUREMENTS**

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Related U.S. Application Data

[63] Continuation of Ser. No. 83,630, Jun. 28, 1993, abandoned.

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[52] **U.S. Cl.** 455/192.2; 455/182.2;
455/258; 375/344

[58] **Field of Search** 375/344, 97

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[57] **ABSTRACT**

A technique for maintaining a center frequency of an input signal at a nominal center frequency. Apparatus which implements this technique divides, using a pair of bandpass filters (122, 124), the modulation bandwidth of the input signal into two halves (half-bands) and measures the signal strength of the input signal in each half-band. Then, circuitry (126, 128, 130), connected to each filter, compares the signal strengths of the signals passing through each filter. The circuitry produces a difference signal representing a difference between the strength of each signal passing through each respective filter. The difference signal is used to adjust a frequency of a local oscillator signal produced by a local oscillator (112) within a tuner (104) such that the center frequency of the input signal is maintained by the tuner at the nominal center frequency.

22 Claims, 5 Drawing Sheets